

Patricia M. French  
Senior Attorney



300 Friberg Parkway  
Westborough, Massachusetts 01581  
(508) 836-7394  
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[pfrench@nisource.com](mailto:pfrench@nisource.com)

August 22, 2005

BY OVERNIGHT DELIVERY AND E-FILE

Mary L. Cottrell, Secretary  
Department of Telecommunications and Energy  
One South Station  
Boston, MA 02110

Re: Bay State Gas Company, D.T.E. 05-27

Dear Ms. Cottrell:

Enclosed for filing, on behalf of Bay State Gas Company ("Bay State"), please find Bay State's responses to the following Record Requests:

From the Department:

RR-DTE-109 (Bulk)

RR-DTE-139

RR-DTE-151

RR-DTE-172

Please do not hesitate to telephone me with any questions whatsoever.

Very truly yours,

Patricia M. French

cc: Per Ground Rules Memorandum issued June 13, 2005:

Paul E. Osborne, Assistant Director – Rates and Rev. Requirements Div. (1 copy)  
A. John Sullivan, Rates and Rev. Requirements Div. (4 copies)  
Andreas Thanos, Assistant Director, Gas Division (1 copy)  
Alexander Cochis, Assistant Attorney General (4 copies)  
Service List (1 electronic copy)

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE  
THIRD SET OF INFORMATION REQUESTS FROM THE D.T.E.  
D. T. E. 05-27

Date: August 22, 2005

Responsible: Danny G. Cote, General Manager  
Thomas E. McKain, Assistant To Chief Operating Officer  
Richard F. James, Vice President Information Technology

**BULK RESPONSE**

RR-DTE-109: In reference to DTE-3-26, provide supporting documentation for each of the actual costs shown for the listed projects from 1 through 15 to include all components of costs, including AFUDC, if applicable.

Response: Please see Attachment RR-DTE-109 (A) for a table summarizing the 15 information technology-related projects. The column headings include (1) the list number, which corresponds to the list of investments first reported by the Company in Exh. BSG/DGC-11, (2) the year the project was undertaken, (3) the project name, which generally describes the project, (4) total costs associated with each project, (5) the authorization number(s) used to charge expenses to a given project, (6) project costs charged against each respective authorization number, (7) the asset number, which is used to identify authorization expenses closed to plant, (8) GL 290 reference letter, which is a system established to cross reference the authorization charges (ADDITIONS) closed to plant and Attachment RR-DTE-109 (B), as explained below, and (9) an attachment page number, which is the corresponding page reference to Attachment RR-DTE-109 (B).

Attachment RR-DTE-109 (B) generally consists of Lawson General Ledger (GL290) reports, including account activity, for each project completed between the years 2000 through 2004. For projects completed in the years prior to 2000 limited detailed data is available.<sup>1</sup> Therefore, in preparation of this response, the Company was not able to produce GL290 reports for all of the investments made prior to 2000. See the comment "Data Not Available" in column (8) of Attachment RR-DTE-109 (A) for each of the applicable projects.

Attachment RR-DTE-109 (C) includes invoices associated with List No. 15 (One Recording / Quality Assurance).

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<sup>1</sup> For years prior to 2000 only account period balances are retained and available.

Attachment RR-DTE-109 (D) includes currently available invoices associated with List No. 14 (Genesys CTI).

The GL290 reports, generated from the Company's general ledger, reflect the accumulation of charges and expenses for a specific authorization. The charges and expenses originate from amounts recorded in both the Company's Accounts Payable and Payroll systems. Expense amounts that are capitalized are "closed" (transferred) to the Asset Management System and are designated as an "ADDITION" line item on the GL290 report. Once these "ADDITIONS" are transferred to the Asset Management system they are considered booked to the Company's plant accounting system. The GL290 reports reflect the best summary of expenses booked to plant that is currently available to the Company for technology-related investments. Unlike Bay State's Work Order Management System ("WOMS"), where the Company can generate cost detail reports by specific project authorization number for operations-related work, Bay State does not have a similar capability for technology-related work. Further, the Accounts Payable and Payroll systems that feed the General Ledger are comprised of records associated with literally millions of transactions per year. Therefore, the Company is not able to cost effectively produce within a reasonable timeframe any additional backup documentation.

As discussed by Mr. James and Mr. McKain during their cross examination on July 26, 2005 (see Transcript Vol. 15), there are a number of reasons driving the need for each of the Company's respective IT expenditures listed on Attachment RR-DTE-109 (A). Further, the Company also discusses below the reasonableness of these non-discretionary, intangible plant investments.

Regarding List No. 1, the Company undertook a strategy to move from a mainframe-based environment to a client server / personal computer / mainframe environment. This move provided employees with much faster and more powerful computing capabilities, which were necessary to keep pace with the demands of a rapidly evolving business environment.

Regarding List No. 3, the implementation of the EASy System, which allowed Bay State to more efficiently manage and process gas contracts, trading, capacity release, etc. than its former proprietary system, was vital in facilitating Bay State's movement into a more complicated, unbundled gas supply market. Further, the former system was not Y2K compliant.

Regarding List No. 4, 5, 6 and 7, the Company's legacy customer information system was over 20 years old, and not Y2K compliant. Given the computer language and the operating system that it ran on, it was not possible to fix the old system. Therefore it was necessary for Bay State to obtain a new system and have it operational no later than 12/31/99. To do otherwise would have put the Company and its customers at risk.

In addition to the reasons listed above, there is a general and ongoing need for Bay State to continually move toward new technology to improve customer service and business efficiency. Over time, computer software and hardware vendors no longer support older, legacy systems, which become difficult and costly, if not impossible, to maintain. The rapid change in technology simply does not lend itself to maintaining systems over long periods of time.

As explained on page 48 of Mr. Cote's testimony (see Exh. BSG/DGC-1), the reasonableness of all IT projects greater than \$300,000 are determined through a review process, which includes a complete business case analysis. Regarding Bay State's decision not to seek a competitive bid on the conversion of its customer information system, as Mr. McKain explains on page 2545 of Transcript Vol. 15, IBM was the most logical and reasonable choice given their institutional knowledge of NIPSCO's existing CIS system. Specifically, applying the use of existing code at NIPSCO was extremely desirable for Bay State in that, in addition to leveraging existing institutional knowledge, future support costs were anticipated to be generally lower, because "common" solutions could be used across multiple business units. In fact, the last page of the study conducted by the Gartner Group (formerly META Group), which is an industry technology advisory group, shows that monthly costs per customer for "CIS Costs" at Bay State is lower than the range for the benchmarks and trends for similar services in the 2000 to 2004 period.<sup>2</sup> Furthermore, common systems support not only lowers IT support costs, but generally allows NiSource to focus attention and operating practices from a common perspective thus creating a best practice approach resulting in improved customer service. Consequently, when the opportunity arises to use "common" systems (due to Y2K or other application age and condition issues), it makes sense to strive for such consistency within the enterprise.

Further, to gauge the overall reasonableness of Bay State's total CIS capital investment shown in List Numbers 4, 5, & 6 of Attachment RR-DTE-109 (A), the Company requested information from the Gartner Group. In particular, since its CIS investment represented approximately half of the Company's miscellaneous plant additions, Bay State contracted the Gartner Group to prepare a report concerning survey information they had for CIS installations from the past 10 to 15 years. This report included information that the Gartner Group collected, including data related to 38 CIS installations and represents what Gartner Group calls their CIS Implementation Survey benchmark. For the seven companies of comparable size to Bay State (250,000 meters to 450,000 meters), the implementation costs adjusted for inflation ranged from (\$6,380,000 to \$50,800,000) with an average of \$26,145,714. The approximately \$24,600,000 (items 4, 5 & 6 adjusted for inflation consistent with the survey information) spent by Bay State is well within

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<sup>2</sup> Bay State Gas' CIS operating cost is at approximately \$0.49/customer/month versus a range of \$0.70 to \$1.50/customer/month for the benchmark group.

the range and slightly below the average spent by comparable companies. Although, no survey information is exact, this survey view does indicate that Bay State's investment for CIS was reasonable and comparable to such investments for other companies of similar size. A copy of the Gartner report has been filed as part of the Company's response to information request AG-3-16 SUPPLEMENT.

Regarding the Company's total CIS conversion project (i.e., List Nos. 4-6), Bay State incurred a total of approximately \$15 million in additional costs over and above the two available project authorization forms shown as List Nos. 5-6 on Attachment RR-DTE-109 (A). In particular, these two projects were initially authorized for \$8.1 million.<sup>3</sup> The lifecycle of any large software development project is to 1) analyze the requirements and identify the "gap" between what is available and that which is required to address the business need, 2) design the changes required, 3) program the changes, 4) test the results for accuracy, and, 5) implement the system into production. The original \$8.1 million estimate was made with the assumption that the gaps between the NIPSCO system and the Bay State requirements were relatively minor, but this turned out not to be the case. In addition, according to the initial project plan, Bay State personnel were to have been responsible for testing and training, among other project related tasks. These internal resources either were not available or did not have the capacity given their other workload to perform the designated task within the schedule. Therefore, they had to be supplemented with outside contractors resulting in increased cost.

As posed by Ms. French to Mr. McKain and Mr. James on Page 2590 of Transcript No. 15, during redirect, wide deviations from the initial CIS cost estimate to the actual costs can occur due to numerous factors, including: (1) changes in project scope, (2) changes in technology, (3) changes in the resources assigned, (4) changes in schedule, (5) changes in complexity, and/or (6) simply inaccurate estimation. These deviations can occur, given the unique nature of technology solutions, because initial estimates are made before any actual development work is completed. Nevertheless, over the past few years NiSource has worked hard to sharpen the initial estimating process and overall business case assessment. These changes are resulting in actual costs with less deviation from initial estimates.

Also, as provided in the Company's response to RR-AG-75 CONFIDENTIAL, the main drivers to the additional costs were associated with the need for additional post-implementation customer coding, testing support, data conversion project change requests and related problems.

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<sup>3</sup> The Company has been unable to locate the initial authorization form for List No. 4 – Customer Accounting. The final costs booked to plant associated with this aspect of the CIS conversion project were \$1.7 million. Accordingly, the \$15 million worth of cost overruns associated with the overall CIS project (List Nos. 4-6) is overstated.



(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
List No.	Year(s)	Project Name	Total Costs	Authorization #	Authorization Charges	Asset #	GL 290 Reference Letter	Attachment RR-DTE-109 (B) Page #
1	1996	Client Server Migration	\$ 5,393,116	295091	5,393,116.00	22771	W	Page 2
2	1999, 2000, 2002	SCADA	\$ 371,214	283030-3006 283030-0000 293030-2002 283030-3006	114,135.06 29,780.42 3,654.92 <u>223,645.06</u> 371,215.46	36287 36287 40331 49186	A Y X B	Page 7 Page 17 Page 23 Page 14
3	1999, 2000	EASy System	\$ 3,107,626	293030-3000 293030-3000 293030-3000	2,856,520.47 121,982.00 <u>129,124.45</u> 3,107,626.92	24545 26426 38350	C <b>Data Not Available</b> D	Page 26  Page 33
4	1999	Customer Accounting	\$ 1,754,019			26435	<b>Data Not Available</b>	Page 168 - 200
5	1999, 2000	CIS / Customer Accounting	\$ 15,403,324			26423 38350 49185 293031-3990 293031-3991	<b>Data Not Available</b> <b>Data Not Available</b> <b>Data Not Available</b> E J	Page 168 -200 Page 168 -200 Page 168 -200 Page 44 Page 56
6	2000, 2001	CIS Pro Edits	\$ 6,142,735	293030-3003 293030-3004 293031-3990 293031-3991 295091-0072 Sub Total 293031-3991 Sub Total Total	\$ 3,594,167.69 216,460.71 537,997.16 1,663,143.85 <u>44,729.41</u> 6,056,498.82 <u>86,237.31</u> 86,237.31 \$ 6,142,736.13	35193 35193 35193 35193 35193  42681	V M F G  K	Page 87 Page 69 Page 42 Page 49  Page 56
7	2002, 2003	CIS Enhancements	\$ 371,064	253030-3051 293031-3991 253030-3051 223030-3003	135,792.63 14,192.47 3,602.21 <u>217,478.13</u> 371,065.44	44647 47839 49184 54699	N H O L	Page 102 Page 54 Page 105 Page 65
8	2001	Progress V. 9	\$ 105,541	293030-3053	105,541.50	39257	P	Page 113
9	2003	System Changes to Accommodate Unbundling (1)	\$ 155,150	223030-3002 223030-3002	165,503.17 <u>(10,353.03)</u> 155,150.14	54701 54701	Z Z	Page 151 Page 151
10	2003	CIS Meter to Cash	\$ 147,429	223030-3006	147,429.50	54700	R	Page 123
11	2003	System Changes to Accommodate Unbundling (2)	\$ 172,204	253030-3052	172,204.49	58317	S	Page 134
12	2003	Corporate Services	\$ 812,361	510700-0000 510700-0000	114,474.17 <u>697,887.75</u> 812,361.92	54945 54947	AA BB	Page 153 Page 157
13	2003, 2004	Meter Inventory	\$ 106,349	223030-3004 510700-0000 223030-3004	5,676.00 67,506.00 <u>33,167.35</u> 106,349.35	61381 61630 54702	T DD T	Page 141 Page 163 Page 141
14	2004	Geneysis CTI	\$ 191,480	23030-3003 510700-0000	160,939.25 <u>30,541.00</u> 191,480.25	61383 61632	U CC	Page 146 Page 163
15	2004	One Recording / Quality Assurance	\$ 145,366	233030-3006	145,366.20	60903	Q	Page 118



# SIS Indiana, LLC

455 Park Place  
Suite 301  
Lexington, KY 40511  
Phone (859) 977-4747  
Fax (859) 977-4750

Bay State Gas Company  
D.T.E. 65-27  
Attachment RR-DTE-109 (C)  
Page 1 of 3

## Invoice 998

Date	12/05/2003
Status	Created
SO #	727

<b>Bill To</b>
<b>NiSource</b> 1600 Dublin Road Columbus, OH 43215 Contact - Technology Store Phone (614) 481-1386

<b>Ship To (Unless noted below)</b>
<b>NiSource/Baystate Gas Co</b> 2025 Roosevelt Ave. SPRINGFIELD, MA 01104 Contact - Larry Meccariello Phone (413) 781-9200x2070

Customer PO#	Ship Via	Terms	Sales Person
PO004186MS	Ground Shipping	Due on Receipt	Perhacs, Jerod

Qty	Description	Vendor Part#	Price**	Total
3.00	Config # xSeries Config		0.00	0.00
	Internal			
3.00	x345, Xeon 2.67GHz/533MHz,	867051X-	2,299.00	6,897.00
	512KB, 512MB, OB, Ultra320, Rack			
6.00	256MB PC2100 CL2.5 ECC DDR	33L5037-	140.25	841.50
	SDRAM RDIMM			
3.00	IBM ServeRAID-6i SCSI	71P8595-	374.25	1,122.75
	Controller			
18.00	36.4GB 10K-rpm Ultra320 SCSI	32P0726-	206.25	3,712.50
	HS SL HDD			
3.00	350W H/Swap Redundant	59P4057-	186.75	560.25
	P/Supply Upgrade Kit			
3.00	Remote Supervisor Adapter	09N7585-	374.25	1,122.75
3.00	EPac 3yr onsite 24x7x4 (x343)	21P2078-	0.00	0.00
1.00	NetBAY 1U Flat Panel Monitor	32P1031-	1,865.75	1,865.75
	Console Kit (inc. US k'board)			
1.00	NetBAY25 SR Rack Cabinet	9306250-	1,100.75	1,100.75
	(vented)			
1.00	NetBAY 1x4 Console Switch	09N4290-	1,019.25	1,019.25
3.00	NetBAY 12-foot Console Cable	94G7447-	48.75	146.25
	Set			
2.00	IBM DPI Universal Rack PDU	32P1736-	152.15	304.30

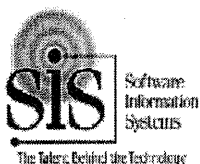
### Ship Item(s) Below To

<b>NiSource</b> 1600 Dublin Road Columbus, OH 43215 Contact - Soundar Chinnadural Phone (614) 481-1629
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3.00	x345, Xeon 2.67GHz/533MHz,	867051X-	2,299.00	6,897.00
	512KB, 512MB, OB, Ultra320, Rack			
6.00	256MB PC2100 CL2.5 ECC DDR	33L5037-	140.25	841.50
	SDRAM RDIMM			
3.00	IBM ServeRAID-6i SCSI	71P8595-	374.25	1,122.75
	Controller			

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Continued...  
Page 1



# SIS Indiana, LLC

455 Park Place  
Suite 301  
Lexington, KY 40511  
Phone (859) 977-4747  
Fax (859) 977-4750

Bay State Gas Company  
D.T.E. 05-27  
Attachment RR-DTE-109 (C)  
Page 2 of 3

## Invoice 998

Date	12/05/2003
Status	Created
SO #	727

Qty	Description	Vendor Part#	Price**	Total
18.00	36.4GB 10K-rpm Ultra320 SCSI HS SL HDD	32P0726-	206.25	3,712.50
3.00	350W H/Swap Redundant P/Supply Upgrade Kit	59P4057-	186.75	560.25
3.00	Remote Supervisor Adapter	09N7585-	374.25	1,122.75
3.00	EPac 3yr onsite 24x7x4 (x343)	21P2078-	0.00	0.00
1.00	NetBAY 1U Flat Panel Monitor Console Kit (inc. US k'board)	32P1031-	1,865.75	1,865.75
1.00	NetBAY25 SR Rack Cabinet (vented)	9306250-	1,100.75	1,100.75
1.00	NetBAY 1x4 Console Switch	09N4290-	1,019.25	1,019.25
3.00	NetBAY 12-foot Console Cable Set	94G7447-	48.75	146.25
2.00	IBM DPI Universal Rack PDU	32P1736-	152.15	304.30
<b>Ship Item(s) Below To</b>				
<div style="border: 1px solid black; padding: 5px;"> <b>NiSource</b>  801 East 86th Ave  Merrillville, IN 46410  Contact - Dan Miles  Phone (630) 917-2339 </div>				
6.00	Windows 2003 Server Standard Open License	651811-	675.00	4,050.00
1.00	GRAND TOTAL FOR CONFIGURATION:		0.00	0.00

{ 50% BSG (3 Servers + Access) }  
{ 50% COH (3 Servers + Access) }  
acct #      Amount  
BSG 233030-3006 # 20,718.05  
COH 03-0001272-00 # 20,718.05  
  
\$ 41,436.10

OK to Pay  
C. Puller  
12/09/03

### Customer Copy

#### Terms:

Net Due on Receipt of Invoice  
A service charge of 1 1/2% (annual rate of 18.9%) will be applied to ALL accounts past 30 days.

#### Remit Payment To:

P.O. Box 890479  
Charlotte, NC 28289-0479

Subtotal	41,436.10
Sales Tax	0.00
Total Amount Due	41,436.10



NICE Systems Inc.  
301 Rt 17 North, 10th Floor  
07070 Rutherford, NJ, USA

Tel: +1 (201) 964-2600  
Fax: +1 (201) 964-2610  
US Tax Id: 77-0250126  
www.nice.com

PAGE :  
INVOICE DATE :  
SHIPMENT DATE :

1 Bay State Gas Company  
D.T.E. 05-27  
09 DECEMBER 2008  
Attachment RRD-109 (C)  
Page 3 of 3  
09 DECEMBER 2008

## INVOICE NO. : 20020378

<b>BILL TO :</b> NISOURCE, INC. 801 EAST 86TH AVENUE MERRILLVILLE IN 46410 UNITED STATES	<b>SHIP TO :</b> NISOURCE, INC. 2025 ROOSEVELT AVE. SPRINGFIELD MA 01104 UNITED STATES
<b>ATTN:</b> LARRY MECCARIELLO <b>TEL:</b> -413-781-9200 <b>FAX:</b>	<b>ATTN:</b> LARRY MECCARIELLO <b>TEL:</b> -413-781-9200 <b>FAX:</b>
<b>NICE ORDER NO. :</b> 400522 <b>CUSTOMER ORDER NO. :</b> PREBUILD <b>END USER :</b> NISOURCE, INC. <b>INSTALL STATE/PROVINCE :</b> MA	<b>PAYMENT TERMS :</b> NET 30 <b>PAYMENT DUE :</b> 08 JANUARY 2004 <b>FREIGHT TERMS :</b> PREPAY & ADD <b>ACCOUNT NO. :</b> 2017676

ITEM	PART NO.	DESCRIPTION	QTY	UNIT PRICE USD	TOTAL USD
1	DEPOSIT(+)	ADVANCE PAYMENT ON NICE SYSTEMS RECORDING SOLUTION INCLUDING 5% MA STATE TAX	1	124,648.15	124,648.15
<b>TOTAL AMOUNT :</b>					124,648.15
<b>SALES TAX :</b>					0.00
<b>TOTAL USD :</b>					124,648.15

Contact: Brian Moore  
(201) 964-2649

PLEASE REMIT PAYMENT TO : 301 ROUTE 17 NORTH, 10TH FLOOR  
RUTHERFORD, NJ 07070, USA



**GENESYS®**  
Genesys Telecommunications  
Laboratories, Inc.  
2001 Junipero Serra Blvd.  
Daly City CA 94014

Telephone: 415-437-1100  
Fax: 415-437-1260

# Invoice

Bay State Gas Company  
D.T.E. 05-27  
Attachment RR-DTE-109 (D)  
Page 1 of 6

Invoice Date: 06 JUN 2003

Payment Due Date: 06 JUL 2003

Page: 1 of 1

## Bill To 41058

NiSource  
801 E 86th Avenue  
MERRILLVILLE IN 46410  
UNITED STATES

USA

Attention: Accounts Payable  
Site # 1133BAY

*Bay State*

## Ship To 41058

NiSource  
801 E 86th Avenue  
MERRILLVILLE IN 46410  
UNITED STATES

USA

Attention: CASSANDRA G. PULLIN

Federal Taxpayer ID: 94-3120525  
Payment Terms: Due 30 days from invoice date  
Print Date: 16 JUN 2003  
Purchase Order: **CONTRACT / AMENDMENT**  
Sales Order: 129261  
Order Date: 05 JUN 2003  
Direct Sls Rep: Ewaldz, Stephen  
Channel Sls Rep: Bongiorno, Thomas R.  
Genesys Contact: HOANG LE (415) 437 1252

Sold To: 41058  
IncoTerms: FCA San Francisco  
Complete Delivery: Y

*Authorization #*

*223913-3003*  
*233030-3003*

LN	PLN	Item Number	Rev	Shipped	Backorder	UM	Price	Ext. Price
10		3GP06003ABAA v6.5 - Enterprise Routing (ERS) - MS	75	0	EA		1,136.25	85,218.75
		End User:	NiSource					
90		3GP06217ACAA v6.1 - Call Concentrator	75	0	EA		157.50	11,812.50
		End User:	NiSource					
110		3GP06207ACAA v6.5 - IVR Interface (behind)	24	0	EA		300.00	7,200.00
		End User:	NiSource					
150		3GP02015ABAA v6-Maintenance-7x24-new (end user)	1	0	EA		22,954.00	22,954.00
		End User:	NiSource					
		Maintenance Start Date:	07/01/2003					
		Maintenance End Date:	06/30/2004					

Currency: USD  
Tax Date: 06 JUN 2003

Line Total 127,185.25

Total 127,185.25

*OK to pay C. Pullin*  
*6/17/03*

Please Remit to: Genesys Telecommunications Labs, Inc.  
P.O. Box 201005, Dallas, TX 75320-1005  
Wells Fargo, Account # 4911431906  
ABA 121000248 Swift # WFBUS6S

# Invoice

**Chadbourn Marcath, Inc.**  
3318 N. Lake Shore Drive, Suite 100  
Chicago, IL 60657-3959  
312.915.0300

Date	Invoice #
9/2/2003	56794

Bill To
NiSource Soundar Chinnadurai Senior Network Engineer 1600 Dublin Road Columbus, OH 43215

P.O. No.	Terms
	Due on receipt

Quantity	Description	Unit Price	Amount
1	CC Broadcaster Upgrade - Springfield, MA 40% downpayment Out-of-state sale, exempt from sales tax	2,000.00 0.00%	2,000.00 0.00
		<i>Authorization # 233030-3003</i>	
			<i>10/23/03</i>
<b>Total</b>			<b>\$2,000.00</b>

*OK to Pay.  
C. Puller*

**Chadbourn Marcath, Inc.**

3318 N. Lake Shore Drive, Suite 100  
Chicago, IL 60657-3959  
312.915.0300

Bay State Gas Company  
Attachment RR-DTE-109 (D)  
Page 3 of 6

Invoice

Date	Invoice #
12/10/2003	56819

CTI @  
BSG

Bill To
NiSource Soundar Chinnadurai Senior Network Engineer 1600 Dublin Road Columbus, OH 43215

P.O. No.	Terms
	Net 30

Quantity	Description	Unit Price	Amount
1	CC Broadcaster Upgrade - Springfield, MA	2,500.00	2,500.00T
1	Site Visit	2,500.00	2,500.00
-1	less 40% downpayment - ck 88474	2,000.00	-2,000.00T
	Out-of-state sale, exempt from sales tax	0.00%	0.00
<i>Authorization # 233030-3003</i>			
<i>OK to Pay E. Pulleri 12/10/03</i>			
<b>Total</b>			<b>\$3,000.00</b>

**VOICE & DATA NETWORKS, INC.**

Enterprise Communication Integration

6981 Washington Avenue S Direct: 952-946-7999  
Edina, Minnesota 55439 Toll Free: 800-246-7999  
www.voicedata.com Fax: 952-946-1066

Invoice	STDINV036074
Date	12/12/2003
Page	1

**Bill To:**

NISOURCE  
SOUNDAR CHINNADURAI  
1600 DUBLIN ROAD  
COLUMBUS OH 43215

**Ship To:**

NISOURCE-BAY STATE GAS  
LARRY MECCARIELLO  
BAY STATE GAS  
2025 ROOSEVELT AVENUE  
SPRINGFIELD MA 01104

Purchase Order No.	Customer ID	Salesperson ID	Shipping Method	Payment Terms	Req Ship Date	Master No.
SPRINGFIELD MA	COLUMGAS	130	N/A	Net 30	10/22/2003	13,249
Ordered	Shipped	B/O	Item Number	Description	Unit Price	Ext. Price
1	1	0	159373	AVAYA CENTRE CALL MAN SYS <i>PS Combs- Avaya</i> <i>Auth #</i> <i>233030-3003</i> <i>pd 12/12/03</i>	\$6,000.00	\$6,000.00

Thank you for your order.

AVAYA

Standard  
BUSINESS PARTNER

Subtotal	\$6,000.00
Downpayment	\$0.00
Tax	\$0.00
Freight	\$0.00
Trade Discount	\$0.00
Total	\$6,000.00



Remit to: Targetvision  
121 Victor Heights Pkwy  
Victor, NY 14564

NiSource Corporate Services Co.  
Attn: Sandy Pullin  
801 E. 86th Avenue  
Merrillville, IN 46410

NiSource Corporate Services Co.  
1600 Dublin Road  
Columbus, OH 43215

12/16/03		Destination		Net 30 Days	
NCS030808		12/16/2003		RE	
1	1	SOFT-33210	Enterprise Edit 3.0a Package	5,390.00	5,390.00
1	1	SYST-26975	Enterprise Broadcast Pro Customer PC	4,495.00	4,495.00
1	1	SOFT-25116	Enterprise Control Point	900.00	900.00
1	1	CALL-1800	Avaya PS_Combo Interface	4,745.00	4,745.00
1	1	SOFT-31000	Enterprise Live TV Interface	795.00	795.00
1	1	SERV-20500	Custom Development	150.00	1,200.00
1	1	PERI-16337	TV One CORIOscan Connect	300.00	300.00
1	1	SERV-20350	On Site Implementation	1,200.00	1,200.00
1	1	SERV-20910	Education Service 2 Days	2,000.00	2,000.00
1	1	MISC-	Travel & Expense for OnSite Services	1,800.00	1,800.00
8	8	DIST-14025	Philips 27" Smartcard Television	449.00	3,592.00
3	3	DIST-14130	Philips PL/PA/PB/PC Set-Up Remote	60.00	180.00
2	2	DIST-12432	Peerless Carousel for two 25"-27"	232.00	464.00
4	4	DIST-12423	Peerless 2000 Ceiling Yoke 24"-31"W	145.00	580.00
6	6	DIST-12376	Peerless Adj Extension	55.00	330.00
8	8	DIST-12392	Peerless Safty Belt	14.00	112.00
1	1	PERI-16330	TV One Corioscan Pro Rackmount	1,295.00	1,295.00
2	2	DIST-13100	BT Modulator - Agile AM60-550	697.00	1,394.00
1	1	PERI-17907	1/8 plug to RCS plug 6' Cable/Sound	10.00	10.00
1	1	PERI-17903	Cable RCA to F 6' Blue	12.00	12.00
1	1	PERI-17900	Cable - RCA to RCA 6ft Red	15.00	15.00

Subtotal \$30,809.00  
Shipping \$0.00  
Tax (0%) \$0.00  
Total Con't on Page 2



NiSource Corporate Services Co.  
Attn: Sandy Pullin  
801 E. 86th Avenue  
Merrillville, IN 46410

NiSource Corporate Services Co.  
1600 Dublin Road  
Columbus, OH 43215

12/16/03		Destination		Net 30 Days	
NCS030808		12/16/2003		RE	
1	1	PROG-19600	SW Maintence BC	600.00	600.00
1	1	PROG-19602	SW Maintence Edit	900.00	900.00
1	1	PROG-19786	SW Maintence PS Combo	1,200.00	1,200.00
1	1	PROG-19788	SW Maintence Live TV	150.00	150.00
1	1	PROG-19790	SW Maintence Control Point	150.00	150.00
1	1	SERV-20600	Installation, Distribution & Design	8,995.00	8,995.00
1	1	SERV-20730	Site Survey w/TVI & 3rd Party	1,950.00	1,950.00

BSG acct #'s  
BSG-IVR 223913-3003  
BSG-CTI 233030-3003

Amounts  
\$ 22,000  
\$ 22,754  
\$ 44,754. Total

Subtotal	\$44,754.00
Shipping	\$0.00
Tax (0%)	\$0.00
<b>Total</b>	<b>\$44,754.00</b>

OK to Pay  
C. Pullin 12/17/03

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE  
THIRD SET OF INFORMATION REQUESTS FROM THE D.T.E.  
D. T. E. 05-27

Date: August 22, 2005

Responsible: Danny G. Cote, General Manager

RR-DTE-139: To enable the Department to immediately calculate the indicated rate of return, amend the Company's work-order authorization form ROR section to include not only the calculated rate of return, but also a space or box for the assumptions used in the calculation.

Response: In calculating the ROR, the Company incorporates, for each customer class, assumptions on expected incremental load, net revenue / gross margin, O&M costs, Capital Costs (Mains, Services, and Meters), and Property Taxes. Due to the number of assumptions involved in the calculation, the Company has found it to be problematic in fitting all the assumptions on the limited space available on the Main Authorization form.

As such, the Company proposes as an alternative to a substantial reformatting of the Main Authorization form to amend the form. See Attachment RR-DTE-139, Page 1, for a copy of the existing Main Authorization form with additional proposed language in the upper right hand corner directing the reader to see the attached ROR Summary and Worksheet for Growth / Revenue projects. See Attachment RR-DTE-139, Page 2 through 4, for sample ROR Summary and Worksheets that would be attached to the Main Authorization form.

The Company is also willing to amend its Capital Authorization Handbook, which was originally provided in the Company's response to DTE-16-09, to include instructions that as part of the authorization process a copy of the ROR Summary and Worksheet must be attached to the Main Authorization form.

**BSG/NU Construction Authorization Order**

Project ID# \_\_\_\_\_ Work Code \_\_\_\_\_

ROR / MIS:	0.00%	0	0.00%
------------	-------	---	-------

DESCRIPTION OF PROJECT:  
Authorization is to provide natural gas

A ROR Summary & Worksheet  
ATTACHMENT REQUIRED  
for Growth / Revenue projects.

← *SAMPLE*

# Services 0 Total Service Cost \$ \$0 Cust. Contribution \$0

COST RECORD	Budget	Actual	Variance	Today's Date:
Materials	\$0			Start Date:
Company Labor	\$0			Comp Date:
Purchases	\$0			Estimator:
Overheads	\$0			Sales Rep:
Total	\$0			CIS #: 0

Total cost estimated:	\$0	Total services w/o overhead:	\$0
		Total mains w/o overhead:	\$0

Pipe Added	Pipe Size	Pipe Type	Estimate	Actual	W/O # Install	W/O # Tie-in
Street Name and Town						

Pipe Retired	Pipe Size	Pipe Type	Estimate	Actual	W/O # Install	W/O # Tie-in
Street Name and Town						

Level	<\$5k	\$5k-\$10k	\$10k-\$100k	>\$100k-\$250k	Date
Business Dev	Engineering Tech	Operations Engineer	Operations Manager	Mgr. Eng.	
Name:				Gen. Mgr.	
Date:				Dir. Sales	
	New Business Rep.	Sales Manager		Dir. Finance	
Name:				VP Tech Ops	
Date:					

Replacement & Other	<\$10k	\$10k-\$100k	\$100k-\$250k	All Jobs >=\$250k	Date
	Operations Engineer	Operations Manager	Manager Engineering	Mgr. Eng.	
Name:				Gen. Mgr.	
Date:				Dir. Finance	
			General Manager	VP Tech Ops	
Name:				VP Finance	
Date:				Exec. VP:	

\*ALL JOBS OVER \$250,000 SHALL BE SUBMITTED AS A SPECIFIC BUDGET UNDER SEPARATE APPROVAL

**Massachusetts Internal Rate of Return  
SUMMARY - SAMPLE**

Bay State Gas Company  
D.T.E. 05-27  
Attachment RR-DTE-139  
Page 2 of 4

**Scenario:** **Base Case**  
Development Name **Sample**  
Address North Andover  
Town 404

Division Lawrence  
Number of Meters 1  
  
Proposed Heat Load Mcf 80  
Proposed Base Load Mcf 24  
Total Load 104

**Rate Schedule (year 1)**

Heating	N/A
---------	-----

Heat Load per Meter 80  
Base Load per Meter 24  
Load Per Meter 104

**Estimated Cost:**

Main \$1,100  
Service 500  
Meter & Fit 100  
Project Total \$1,700  
Cost per Meter \$1,700

**Cash Flow Results**

**55 Year Return**

Rate of return - IRR 8.93%  
Customer Contribution \$0  
\* NPV \$55  
\* Net Payback (years) 37  
\* Net Gas Revenues 395

Bay State Gas Company  
D T.E. 05-27  
Attachment RR-DTE-139  
Page 3 of 4

## Page 3 of 4

Year	Investment	Revenue	Net Revenue	Marginal O&M	Property Tax	Before Taxes	20 Year Class	Income Taxes	Cash Flow	CASH FLOW	NPV	Year
1	\$1,700	\$395	\$395	\$162	\$28	\$205	\$64	\$55	\$150	\$138	(\$1,700)	0
2	NA	395	395	162	28	205	123	32	173	146	(\$1,562)	1
3	NA	395	395	162	28	205	144	36	189	132	(1,416)	2
4	NA	395	395	162	28	205	165	39	169	119	(1,284)	3
5		395	395	162	28	205	97	42	205	108	(1,164)	4
6		395	395	162	28	205	90	45	160	97	(1,057)	5
7		395	395	162	28	205	83	48	157	88	(959)	6
8		395	395	162	28	205	77	50	155	80	(871)	7
9		395	395	162	28	205	76	51	154	73	(791)	8
10		395	395	162	28	205	76	51	154	68	(718)	9
11		395	395	162	28	205	76	51	154	62	(650)	10
12		395	395	162	28	205	76	51	154	57	(588)	11
13		395	395	162	28	205	76	51	154	53	(531)	12
14		395	395	162	28	205	76	51	154	49	(478)	13
15		395	395	162	28	205	76	51	154	45	(430)	14
16		395	395	162	28	205	76	51	154	41	(385)	15
17		395	395	162	28	205	76	51	154	38	(344)	16
18		395	395	162	28	205	76	51	154	35	(306)	17
19		395	395	162	28	205	76	51	154	32	(271)	18
20		395	395	162	28	205	76	51	154	30	(239)	19
21		395	395	162	28	205	38	66	140	25	(209)	20
22		395	395	162	28	205	0	81	125	20	(185)	21
23		395	395	162	28	205	0	81	125	19	(165)	22
24		395	395	162	28	205	0	81	125	19	(146)	23
25		395	395	162	28	205	0	81	125	17	(129)	24
26		395	395	162	28	205	0	81	125	16	(113)	25
27		395	395	162	28	205	0	81	125	15	(98)	26
28		395	395	162	28	205	0	81	125	13	(85)	27
29		395	395	162	28	205	0	81	125	12	(73)	28
30		395	395	162	28	205	0	81	125	11	(61)	29
31		395	395	162	28	205	0	81	125	10	(51)	30
32		395	395	162	28	205	0	81	125	10	(41)	31
33		395	395	162	28	205	0	81	125	9	(33)	32
34		395	395	162	28	205	0	81	125	8	(24)	33
35		395	395	162	28	205	0	81	125	7	(17)	34
36		395	395	162	28	205	0	81	125	7	(10)	35
37		395	395	162	28	205	0	81	125	6	(4)	36
38		395	395	162	28	205	0	81	125	6	2	37
39		395	395	162	28	205	0	81	125	5	8	38
40		395	395	162	28	205	0	81	125	5	13	39
41		395	395	162	28	205	0	81	125	5	17	40
42		395	395	162	28	205	0	81	125	4	21	41
43		395	395	162	28	205	0	81	125	4	25	42
44		395	395	162	28	205	0	81	125	4	29	43
45		395	395	162	28	205	0	81	125	3	32	44
46		395	395	162	28	205	0	81	125	3	35	45
47		395	395	162	28	205	0	81	125	3	38	46
48		395	395	162	28	205	0	81	125	3	40	47
49		395	395	162	28	205	0	81	125	2	43	48
50		395	395	162	28	205	0	81	125	2	45	49
51		395	395	162	28	205	0	81	125	2	47	50
52		395	395	162	28	205	0	81	125	2	50	51
53		395	395	162	28	205	0	81	125	2	51	52
54		395	395	162	28	205	0	81	125	1	53	53
55		395	395	162	28	205	0	81	125	1	55	54
56		0	0	0	0	0	0	0	0	0	55	55
57		0	0	0	0	0	0	0	0	0	56	56
58		0	0	0	0	0	0	0	0	0	57	57
59		0	0	0	0	0	0	0	0	0	58	58
60		0	0	0	0	0	0	0	0	0	59	59
61		0	0	0	0	0	0	0	0	0	60	60
62	\$11,565	\$0,884	\$9,882	\$4,057	\$695	\$5,130	\$1,700	\$1,346	\$2,085	(\$113)	\$50	52

RATE OF RETURN ESTIMATE

SAMPLE

Project: SAMPLE  
North Andover

Total Capital and O&M Costs

Meter Counts, Mcf Load and Net Revenue

Capital			Meter Counts	1
Mains	\$	1,100	Load (Mcf)	104
Services		500	Net Revenue	\$ 395 annual
Meters		100		
Marginal Capital		0		
Total	\$	1,700		

O & M costs \$ 162 annual

Property Tax Rate \$ 16.35 per thousand

Results Summary	
55 Yrs.	
* IRR	8.92%
* NPV	\$53
* Customer Contribution	\$0

Year	Investment	Revenue	O&M	Property Tax	Profit Before Taxes	Depreciation 20 Year Class	Income Taxes	Total Net Income	Total Net Cash Flow (\$1,700)	P.V. OF Cash Flow (\$1,700)	Payback Calculation (\$1,700)	Payback Period
1	\$1,700	\$395	\$162	\$28	\$205	\$64	\$55	\$86	\$150	138	(\$1,562)	1
2		395	162	28	205	123	32	50	173	146	(1,416)	2
3		395	162	28	205	114	36	56	169	132	(1,284)	3
4		395	162	28	205	105	39	61	166	119	(1,165)	4
5		395	162	28	205	97	42	66	163	108	(1,057)	5
6		395	162	28	205	90	45	70	160	97	(960)	6
7		395	162	28	205	83	48	74	157	88	(872)	7
8		395	162	28	205	77	50	78	155	80	(792)	8
9		395	162	28	205	76	51	78	154	73	(719)	9
10		395	162	28	205	76	51	78	154	68	(651)	10
11		395	162	28	205	76	51	78	154	62	(589)	11
12		395	162	28	205	76	51	78	154	57	(532)	12
13		395	162	28	205	76	51	78	154	53	(479)	13
14		395	162	28	205	76	51	78	154	48	(431)	14
15		395	162	28	205	76	51	78	154	45	(386)	15
16		395	162	28	205	76	51	78	154	41	(345)	16
17		395	162	28	205	76	51	78	154	38	(307)	17
18		395	162	28	205	76	51	78	154	35	(272)	18
19		395	162	28	205	76	51	78	154	32	(240)	19
20		395	162	28	205	76	51	78	154	30	(211)	20
21		395	162	28	205	38	66	102	139	25	(186)	21
22		395	162	28	205	0	80	125	125	20	(166)	22
23		395	162	28	205	0	80	125	125	19	(147)	23
24		395	162	28	205	0	80	125	125	17	(130)	24
25		395	162	28	205	0	80	125	125	16	(114)	25
26		395	162	28	205	0	80	125	125	15	(100)	26
27		395	162	28	205	0	80	125	125	13	(86)	27
28		395	162	28	205	0	80	125	125	12	(74)	28
29		395	162	28	205	0	80	125	125	11	(63)	29
30		395	162	28	205	0	80	125	125	10	(52)	30
31		395	162	28	205	0	80	125	125	10	(43)	31
32		395	162	28	205	0	80	125	125	9	(34)	32
33		395	162	28	205	0	80	125	125	8	(26)	33
34		395	162	28	205	0	80	125	125	7	(18)	34
35		395	162	28	205	0	80	125	125	7	(11)	35
36		395	162	28	205	0	80	125	125	6	(5)	36
37		395	162	28	205	0	80	125	125	6	1	37
38		395	162	28	205	0	80	125	125	5	6	38
39		395	162	28	205	0	80	125	125	5	11	39
40		395	162	28	205	0	80	125	125	5	16	40
41		395	162	28	205	0	80	125	125	4	20	41
42		395	162	28	205	0	80	125	125	4	24	42
43		395	162	28	205	0	80	125	125	4	27	43
44		395	162	28	205	0	80	125	125	3	31	44
45		395	162	28	205	0	80	125	125	3	34	45
46		395	162	28	205	0	80	125	125	3	36	46
47		395	162	28	205	0	80	125	125	3	39	47
48		395	162	28	205	0	80	125	125	2	41	48
49		395	162	28	205	0	80	125	125	2	43	49
50		395	162	28	205	0	80	125	125	2	45	50
51		395	162	28	205	0	80	125	125	2	47	51
52		395	162	28	205	0	80	125	125	2	49	52
53		395	162	28	205	0	80	125	125	2	51	53
54		395	162	28	205	0	80	125	125	1	52	54
55		395	162	28	205	0	80	125	125	1	53	55
56		395	162	28	205	0	80	125	(1,575)	(15)	38	56
Total	1,700	22,120	9,072	1,568	11,480	1,700	3,837	5,943	4,243	38	(16,560)	

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO THE  
THIRD SET OF INFORMATION REQUESTS FROM THE D.T.E.  
D. T. E. 05-27

Date: August 22, 2005

Responsible: Danny G. Cote, General Manager

RR-DTE-151: Refer to DTE-3-21 Revised, List No. 53, is there anywhere in the record to indicates what amount was reimbursed by Middleboro Gas and credited to this project.

Response: The Company was reimbursed \$85,184 by the Town of Middleboro, Gas & Electric for the Project ID B98D5059 (List No. 53 of DTE-3-21 Revised). A debit was issued to the cash account, and the offset was a credit to the Construction Work In Progress account that was specifically designed internally to accumulate, in aggregate, contributions and/or reimbursements related to capital construction projects.

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

RESPONSE OF BAY STATE GAS COMPANY TO  
RECORD REQUESTS FROM THE D.T.E.  
D.T.E. 05-27

Date: August 22, 2005

Responsible: Joseph A. Ferro, Manager Regulatory Policy

RR-DTE-172: Further revise the Cost of Gas Adjustment Clause, M.D.T.E. No. 36, from the last revision issued in response to RR-DTE-103 to eliminate the "I" term and definition related to the BDF formula in Section 15.02.

Response: Please see the attached revised proposed Cost of Gas Adjustment Clause (CGAC), M.D.T.E. No. 36, with the requested revision, both in a clean (Attachment RR-DTE-172 (Clean)) and red-lined strikeout (Attachment RR-DTE-172 (Redlined)) version. In addition to this change, all other changes from the Company's original proposed CGAC tariff are also shown in red-lined strikeout.

**COST OF GAS ADJUSTMENT CLAUSE**Bay State Gas Company  
D.T.E. 05-27  
Attachment RR-DTE-172 (CLEAN)  
Page 1 of 21**Section**

- 1.0** Purpose
- 2.0** Applicability
- 3.0** Cost of Firm Gas Allowable for Cost of Gas Adjustment Clause (CGAC)
- 4.0** Effective Date of Gas Adjustment Factor (GAF)
- 5.0** Definitions
- 6.0** Gas Adjustment Factor Formulas by High and Low Load Factor Classes
- 7.0** Interruptible Sales, Off-System Sales, and Capacity Release Revenues
- 8.0** Gas Suppliers' Refunds - Accounts 265.85 and 265.86
- 9.0** Reconciliation Adjustments – Other than Purchase Gas Working Capital
- 10.0** Reconciliation Adjustments – Purchase Gas Working Capital
- 11.0** Application of GAF to Bills
- 12.0** Information Required to be Filed with the Department
- 13.0** Other Rules
- 14.0** Customer Notification
- 15.0** Bad Debt Expense and Bad Debt Working Capital

**1.0 Purpose**

The purpose of this clause is to establish procedures that allow Bay State Gas Company ("Bay State" or the "Company"), subject to the jurisdiction of the Department of Telecommunications and Energy ("Department") to adjust, on a semiannual basis, its rates for firm gas sales service in order to recover the costs of gas supplies, along with any taxes applicable to those supplies, pipeline and storage capacity, production capacity and storage, bad debt expense associated with purchase gas costs, and the costs of purchased gas working capital, to reflect the seasonal variation in the cost of gas, and to credit all supplier refunds and the margins above the Annual Threshold associated with capacity credits from non-core sales and transportation, interruptible sales and transportation and capacity release sales to firm ratepayers.

**2.0 Applicability**

This Cost of Gas Adjustment ("CGAC") shall be applicable to Bay State and all firm gas sales made by Bay State, unless otherwise designated. The application to the clause may, for good cause shown, be modified by the Department. See Section 13.0, "Other Rules."

**COST OF GAS ADJUSTMENT CLAUSE**Bay State Gas Company  
D.T.E. 05-27  
Attachment RR-DTE-172 (CLEAN)  
Page 2 of 21**3.0 Cost of Firm Gas Allowable for CGAC**

All costs of firm gas including, but not limited to, commodity costs, taxes on commodity, demand charges, local production and storage costs, other gas supply expense incurred to procure and transport supplies and bad debt percent (from the last general rate case) applied to allowable CGAC costs for the forecast period, transportation fees, costs associated with buyouts of existing contracts, and purchased gas working capital may be included in the CGAC. Any costs recovered through application of the CGAC shall be identified and explained fully in the semi-annual filings outlined in Section 12.0.

**4.0 Effective Date of Gas Adjustment Factor**

The date on which the seasonal Gas Adjustment Factors ("GAF") become effective shall be the first day of the first month of each season as designated by the Company. Unless otherwise notified by the Department, the Company shall submit GAF filings as outlined in Section 12.0 of this clause at least 45 days before they are to take effect.

**5.0 Definitions**

The following terms shall be defined in this section, unless the context requires otherwise.

- (1) **Annual Threshold** - A threshold level of margins, established annually and separately for Capacity Release, Interruptible Sales and Off-System Sales, based on the twelve months ended April 30 each year, the level above which the Company retains 25% of such margins.
- (2) **Bad Debt Expense** - is the uncollectable expense attributed to the Company's gas costs plus allowable working capital derived from the gas cost portion of bad debt.
- (3) **Base Load Requirements** - The annual quantity of gas supply needed to satisfy the lowest level of firm demand based on the average July and August loads.
- (4) **Capacity Release Revenues** - The economic benefit derived from the sale of upstream capacity.
- (5) **Carrying Charges** - Interest expense calculated on the average monthly balance using the consensus prime rate as reported in the *Wall Street Journal*.
- (6) **Economic Benefit** - The difference between the revenues received and the marginal cost determined to serve non-core customers.
- (7) **Interruptible Sales Margins** - The economic benefit derived from the interruptible sale of gas downstream of the Company's distribution system.

**COST OF GAS ADJUSTMENT CLAUSE**

Bay State Gas Company  
D.T.E. 05-27  
Attachment RR-DTE-172 (CLEAN)  
Page 3 of 21

- (8) **Inventory Finance Charges** - As incurred or billed each month for the carrying costs on the value of the balance of inventory gas for the respective month. The total charges shall represent an accumulation of the projected monthly charges as calculated using the monthly average of financed inventory at the existing (or anticipated) financing rate of the Company or through a trust or other financing vehicle.
- (9) **Local Production Capacity and Storage Costs** - Include the ancillary supply costs of providing local manufactured gas, gas dispatching, gas acquisition, and miscellaneous A&G costs as determined in the Company's most recent rate proceeding. Per this proceeding, \$7,401,961 shall be allocated to the peak period and \$325,300 shall be allocated to the off-peak period.
- (10) **SMBA** – Simplified Market Based Allocation Method - Used in determining the allocation of gas costs among High and Low Load Factor classes.
- (11) **Non-Core Commodity Costs** - The commodity cost of gas assigned to non-core sales to which the GAF is not applied. Non-core sales include sales made under interruptible contracts, non-core contracts and off-system sales.
- (12) **Non-Core Sales Margins** - The economic benefit derived from non-core transactions to which the GAF is not applied, including interruptible sales and other non-core sales generated from the use of the Company's Gas Supply resource portfolio.
- (13) **Off-System Sales Margin** - The economic benefit derived from the non-firm sales of natural gas supplies upstream of Company's distribution system.
- (14) **Number of Days Lag** - The number of days lag to calculate the purchased gas working capital requirement as approved by the Department.
- (15) **Off-Peak Commodity** - Unless otherwise approved by the Department, the gas supplies assigned by the Company to serve firm load in the off-peak season.
- (16) **Off-Peak Demand** - Unless otherwise approved by the Department, the gas supply demand and transmission capacity assigned by the Company to serve firm load in the off-peak season.
- (17) **Off-Peak Period** - May through October.
- (18) **Peak Commodity** - Unless otherwise approved by the Department, the gas supplies assigned by the Company to serve firm load in the peak season.
- (19) **Peak Demand** - Unless otherwise approved by the Department, gas supply demand, peaking demands, storage and transmission capacity assigned by the Company to service firm load in the peak season.
- (20) **Peak Period** - November through April.
- (21) **PR Allocator** - The percentage allocated for the portion of annual capacity charges assigned to the seasons calculated in each CGA filing.
- (22) **Pretax Weighted Cost of Capital** - The result of the calculation of the weighted cost of capital minus the weighted cost of debt, divided by one, minus the currently effective combined tax rate, plus the weighted cost of debt.

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- (23) **Purchased Gas Working Capital** - The allowable working capital derived from peak and off-peak, demand and commodity related costs.
- (24) **Tax Rate** is the combined State and Federal income tax rate.
- (25) **Weighted Cost of Capital** is the weighted cost of capital as set in the Company's most recent base rate case.
- (26) **Weighted Cost of Debt** is the weighted cost of debt as set in the Company's most recent base rate case.

**6.0 Gas Adjustment Factor (GAF) Formula**

The Gas Adjustment Factor (GAF) Formula shall be computed on a semiannual basis using forecasts of seasonal gas costs, carrying charges, sendout volumes, and sales volumes. Forecasts may be based on either historical data or Company projections, but must be weather-normalized. Any projections must be documented in full with each filing.

A separate seasonal GAF will be computed for the combined Low Load Factor classes namely Rates R-3, R-4, G-40, G-41, G-42 and G-43; and for the combined High Load Factor classes namely Rates R-1, R-2, OL, G-50, G-51, G-52 and G-53. The calculation of each seasonal GAF utilizes information periodically established by the DTE. The table below lists the following approved cost factors as approved in D.T.E. 05-27:

Local Production & Storage Cost	\$7,727,261
LNG/LPG Production Cost included above	\$5,258,855
Bad Debt Expense Percentage	2.17%

**Peak GAF Formula**

The Peak GAF shall be comprised of a peak demand factor (DFp), a peak commodity factor (CFp), a peak production and storage demand factor (PSp), gas suppliers' refund factors (R1 and R2) defined in Section 8.00 and a bad debt factor (BDF) defined in Section 15.00, for the Company's High and Low Load Factor classes and calculated at the beginning of the peak season according to the following formula:

$$GAF^x = DFp^x + PSp^x + CFp^x + BDF - R1 - R2$$

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$$DFp^x = \frac{Dp^x - NCSMp^x}{P : Sales^x} + RFpd + WCFpd$$

**and:**

$$Dp^x = BASEDp^x + REMAINDp^x + PSp^x$$

**and:**

$$NCSMp^x = CRR^x + ISM^x + NTSM^x$$

**and:**

$$RFpd = Rpd/P:Sales$$

**and:**

$$WCFpd = \frac{[(WCApd \times CC) - (WCApd \times CD)] + (WCApd \times CD) + WCRpd}{(1 - TR) \times P : Sales}$$

**and:**

$$WCApd = Dp \times (DL/365)$$

**Where:**

BASEDp	Peak period base use demand charges assigned on the basis of base use entitlements to low cost pipeline supplies using the average of July and August's daily loads.
CC	Weighted cost of capital as defined in Section 500.
CD	Weighted cost of debt as defined in Section 5.00.
CRR	The returnable Capacity Release Revenues allocated to the peak period. See Section 7.00.
DL	Number of days lag from the purchase of gas from suppliers to the payment by customers.
Dp	Demand Charges allocated to the peak period as defined in Section

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	5.00.
NCSMp <sup>x</sup>	The sum of the returnable Interruptible Non-Core Sales Margins, the returnable Capacity Release Revenues and the Off-System margins.
ISM	The returnable Interruptible Sales Margins allocated to the peak period. See Section 7.00.
NTSM	The returnable Off-System Sales Margins allocated to the peak period. See Section 7.00.
P:Sales	Forecasted sales volumes associated with the peak period.
REMAINDp	Peak period remaining use demand charges assigned to classes on the basis of their load's contribution to the design day load less their base use entitlements to pipeline supplies. This remaining capacity cost is allocated to seasons using the Proportional Responsibility (PR) allocator.
RFpd	Peak demand charge reconciliation adjustment factor per billed peak sales volume associated with demand charges related to the peak period.
Rpd	Reconciliation Costs - Peak demand deferred gas costs, Account 175.21 balance, inclusive of the associated Account 175.21 interest, as outlined in Section 9.00.
TR	Combined Tax Rate as defined in Section 5.00
WCApd	Demand charges allowable for working capital application as defined in Section 10.00.
WCFpd	Working Capital allowable factor per billed peak sales volume associated with demand charges allocated to the peak period as defined in Section 10.00.
WCRpd	Working Capital reconciliation adjustment associated with peak demand charges - Account 176.24 balance as outlined in Section 10.00.
x	Designates Load Factor Specific allocation of costs, based on Simplified Market Based Allocation factors as determined in the Company's most recent rate proceeding.
PSpx	Portion of test year Local Production Capacity and Storage Costs, as defined in Section 5.00, allocated to peak period firm sales through the CGAC as determined in the Company's most recent rate proceeding.

**Peak Commodity Factor (CFp) Formula**

$$CFp^x = \left[ \frac{Cp^x - NCCCp^x + FC^x}{P : Sales^x} \right] + RFpc + WCFpc$$

**and:**

$$Cp^x = BASECp^x + REMAINCpx$$

**and:**

$$RFpc = Rpc / P:Sales$$

**and:**

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$$\text{WCFpc} = \frac{[(\text{WCApc} \times \text{CC}) - (\text{WCApc} \times \text{CD})] + (\text{WCApc} \times \text{CD}) + \text{WCRpc}}{(1 - \text{TR})}$$

P: Sales

**and:**

$$\text{WCApc} = \text{Cp} \times (\text{DL}/365)$$

**Where:**

BASECp	Peak period base use commodity charges assigned on the basis of base use entitlements to low cost pipeline supplies using the average of July and August daily loads.
CC	Weighted costs of capital as defined in Section 5.00
CD	Weighted costs of debt as defined in Section 5.00.
Cp	Commodity Charges allocated to the peak period as defined in Section 5.00.
DL	Number of days lag from the purchase of gas from suppliers to the payment by customers.
FC	Inventory finance charges as defined in Section 5.00.
NCCCp	Non-Core Commodity Costs allocated to the peak period as defined in Section 5.00.
P:Sales	Forecasted sales volumes associated with the peak period.
REMAINCp	Peak period remaining use commodity charges computed as dispatched commodity costs less base use commodity costs.
RFpc	Peak commodity charge reconciliation adjustment factor per billed peak sales volume associated with commodity charges related to the peak period.
Rpc	Reconciliation Adjustment Costs - Account 175.23 balance, inclusive of the associated Account 175.23 interest, as outlined in Section 9.00.
TR	Combined Tax rate as defined in Section 5.00.
WCApc	Commodity charges allowable for working capital application as defined in Section 10.00.
WCFpc	Working Capital allowable factor per peak sales volume associated with commodity charges allocated to the peak period as defined in Section 10.00.
WCRpc	Working Capital reconciliation adjustment associated with peak commodity charges Account 175.24 balance as outlined in Section 10.00.
x	Designates Load Factor class specific allocation of costs, based on Simplified Market Based Allocation factors, as determined in the Company's most recent rate proceeding.

**Off-Peak GAF Formula**

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The Off-Peak GAF shall be comprised of an off-peak demand factor (Dfop) an off-peak production and storage demand factor (PSop), an off-peak commodity factor (Cfop), gas suppliers' refund factors (R1 and R2) defined in Section 8.00 and a bad debt factor (BDF), defined in Section 16.00 for the Company's High and Low Load Factor classes, and calculated at the beginning of the off-peak season according to the following formula.

$$\text{GAFop}^X = \text{DFop}^X + \text{CFop}^X + \text{PSop}^X + \text{BDF} - \text{R1} - \text{R2}$$

**Off-Peak Demand Factor (DFop) Formula**

$$\text{DFop}^X = \frac{\text{Dop}^X}{\text{OP:Sales}^X} + \text{RFopd} + \text{WCFopd}$$

**and:**

$$\text{Dop}^X = \text{Sum:BLDop}^X + (\text{Sum:BLDXop}^X \times (1 - \text{PR}))$$

**and:**

$$\text{RFopd} = \text{Ropd} / \text{OP:Sales}$$

**and:**

$$\text{WCFopd} = \frac{[(\text{WCAopd} \times \text{CC}) - (\text{WCAopd} \times \text{CD})]}{(1 - \text{TR})} \div \frac{(\text{OP:Sales})}{+ (\text{WCAopd} \times \text{CD}) + \text{WCRopd}}$$

**and:**

$$\text{WCAopd} = \text{Dop} (\text{DL}/365)$$

**Where:**

BLDop	Demand charges billed to the Company during the off peak period for the portion of base demand associated with serving base load requirements as defined in Section 5.00.
BLDXop	Base demand costs in excess of demand costs associated with base load level billed to the Company during the off-peak period.
CC	Weighted cost of capital as defined in Section 5.00.

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CD	Weighted cost of debt as defined in Section 5.00
DL	Number of days lag from the purchase of gas from suppliers to the payment by customers.
Dop	Demand charges allocated to the off-peak period as defined in Section 5.00.
OP:Sales	Forecasted sales volumes associated with the off-peak period.
PR	Proportional Responsibility Allocator - A percentage representing a portion of capacity/product charges incurred in the off-peak season and assigned to the peak period calculated in each CGA filing as defined in Section 5.0.
RFopd	Off-peak demand charge reconciliation adjustment factor per billed off peak throughput volume associated with demand charges related to the off peak period.
Ropd	Reconciliation Costs - Account 175.11 balance, inclusive of the associated Account 175.11 interest, as outlined in Section 9.00.
SMBA	Simplified Market Based Allocator – Load Factor specific allocator as defined in Section 5.00
TR	Combined Tax rate as defined in Section 5.0
WCAopd	Demand charges allowable for working capital application as defined in Section 6.1.
WCFopd	Working Capital factor allowable per billed off-peak sales associated with demand charges allocated to the off-peak period as defined in Section 10.0
WCRopd	Working Capital reconciliation adjustment associated with off-peak demand charges balance account 175.14 balance as outlined in Section 10.0.
x	Designates Load Factor specific allocation of costs based on Simplified Market Based Allocation factors, as determined in the Company's most recent rate proceeding.
PS <sub>op</sub> <sup>x</sup>	Portion of test year Local Production Capacity and Storage Costs, as defined in Section 5.00, allocated to off-peak period firm sales through the CGAC as determined in the Company's most recent rate proceeding.

**Off-Peak Commodity Factor (CFop) Formula**

$$CFop^x = \frac{Cop^x - NCCCop^x}{OP : Sales^x} + RFopc + WCFopc$$

**and:**

$$Cop^x = Sum:OPC^x - BOao^x - INJop^x - LIQop^x$$

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$$BOao^X = [(BOop - (BOvolop \times (TPop/TPvolop))) MBA^X]$$

**and:**

$$RFopc = Ropc/OP:Sales$$

**and:**

$$WCFopc = \frac{[(WCAopc \times CC) - (WCAopc \times CD)]}{(1 - TR)} + \frac{(WCAopc \times CD) + WCRopc}{OP : Sales}$$

**and:**

$$WCAopc = Cop \quad (DL/365)$$

**Where:**

BOao	LNG Boil-off allocation as defined in Section 9.00.
BOop	Cost of LNG Boil-off during the off-peak period.
BOvolop	LNG Boil-off volumes purchased in the off-peak period.
CC	Weighted cost of capital as defined in Section 5.00.
CD	Weighted cost of debt as defined in Section 5.00.
Cop	Commodity Charges billed to the off-peak period as defined in Section 5.00
DL	Number of days lag from the purchase of gas from suppliers to the payment by customers. See Section 10.00.
INJop	Injections into underground storage during the off-peak period.
LIQop	Liquefactions into storage during the off-peak period.
NCCCop	Non-core commodity costs allocated to the off-peak period as defined in Section 6.05.
OP:Sales	Forecasted sales volumes associated with the off-peak period.
OPC	Commodity charges associated with gas supply sent out in the off-peak season as defined in Section 5.00.
RFopc	Off peak commodity charge reconciliation adjustment factor per billed off peak sales volume associated with commodity charges related to the off-peak period.
Ropc	Reconciliation Adjustment Cost - Account 175.13 balance, inclusive of the associated Account 175.13 interest, as outlined in Section 9.00.
TPop	Total pipeline commodity purchase charges for the off-peak period.

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TPvolop	Total pipeline purchase volumes for the off-peak period.
TR	Combined Tax rate as defined in Section 5.00.
WCAopc	Commodity charges allowable for working capital application as defined in Section 10.00.
WCFopc	Working Capital allowable per off-peak sales volume associated with commodity charges allocated to the off-peak period as defined in Section 10.00.
WCRopc	Working Capital reconciliation adjustment associated with off-peak commodity charges - Account 176.14 balance, as outlined in Section 10.00.
x	Designates Load Factor specific allocation of costs, based on Simplified Market Based Allocation factors.

**7.0 Interruptible Sales, Off-System Sales and Capacity Release Revenues**

A threshold level of margins will be established annually and separately for Interruptible Sales, Off-System Sales and Capacity Release Revenues. Any margins earned in excess of the predetermined level shall be divided between the Company and its firm sales customers under a 25/75 sharing arrangement. The threshold level of margins shall be adjusted to reflect additions or losses from Customers who switch from FT, FS or Interruptible Transportation ("IT") to IS and conversely, from IS to FT, FS or IT. The Company shall adjust the threshold level annually to reflect Interruptible Sales, Off-System sales, and capacity release revenues for the twelve-month period ending April 30 of each year.

Margins from Interruptible Sales, Off-System Sales and Capacity Release will be reflected as separate credits in the peak season GAF and shall be calculated as the sum of the following:

- (1) 100% of the margins earned up to the predetermined threshold level.
- (2) 75% of the margins earned in excess of the predetermined threshold level.

**8.0 Gas Suppliers' Refunds - Accounts 265.85 and 265.86**

Refunds from upstream capacity suppliers and suppliers of gas are credited to Account 265.85, "Refund-November" if received during the months of March through August, and to Account 265.86 "Refund-May", if received during the months of September through February.

A refund program shall be initiated with each semiannual GAF filing and shall remain in effect for a period of one year. The balance in Account 265.85 shall be placed into a refund program with each November filing. The balance in Account 265.86 shall be placed into a refund program with each May filing. The total dollars to be placed into a given refund program shall be net of over/under-returns from expired programs plus refunds received from suppliers since the previous

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program was initiated. The Company shall track and report on all Account 265.85 and Account 265.86 activities. If during any twelve-month period commencing with the billing month of November for Account 265.85 and May for Account 265.86, the projected supplier refund factor is less than one-hundredth of a cent per therm (\$0.0001), the respective supplier refund account balance shall be transferred into Account 175.26 or Account 175.16 for the November and May filings respectively.

**Gas Supplier's Refund Factors**

R1 The per unit supplier refund associated with the Refund – May program. The following formula shall be used to calculate the R1 factor.

$$R1 = \frac{R1\$ + I}{A:Sales}$$

Where:

R1\$ Ending balance in Account 265.86 “Refund – May”  
I Total forecasted interest calculated on the R1\$ balance computed at the consensus prime rate as reported in the *Wall Street Journal* based on a 365 day year.  
A:Sales Forecasted annual firm sales volumes.

R2 The per unit supplier refund associated with the Refund – November program. The following formula shall be used to calculate the R2 factor.

$$R2 = \frac{R2\$ + I}{A:Sales}$$

Where:

R2\$ Ending balance in Account 265.85 “Refund – November”  
I Total forecasted interest calculated on the R2\$ balance computed at the Federal Reserve Prime Rate based on a 365 day year.  
A:Sales Forecasted annual firm sales volumes.

**9.0 Reconciliation Adjustments – Other than Working Capital**

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- (1) The following definitions pertain to reconciliation adjustment calculations:
- (a) Capacity Costs Allowable per Peak Demand Formula shall be:
- i. Charges associated with upstream storage and transmission capacity procured by the Company to serve firm load in the peak season.
  - ii. Charges associated with transmission capacity procured by the Company to serve base load requirements in the peak season.
  - iii. Charges associated with upstream storage and transmission capacity procured by the Company to serve firm load in excess of base load requirements in the peak period, plus a reallocation of a portion of such charges incurred in the off-peak season to serve firm load.
  - iv. Charges associated with peaking, production and storage capacity to serve firm load in the peak season as determined in the test year of the Company's most recent rate proceeding and allocated to firm sales storage service.
  - v. Credits associated with Non-Core Sales Margins or economic benefits from capacity release, off-system sales for resale and interruptible sales margins allocated to the firm sales service.
  - vi. Credits associated with daily imbalance charges billed transportation customers in the peak period.
  - vii. Peak demand Carrying Charges as defined in Section 5.00.
- (b) Gas Costs Allowable Per Peak Commodity Formula shall be:
- i. Charges associated with gas supplies, including any applicable taxes, purchased by the Company to serve firm load in the peak season, plus a reallocation of LNG boiloff costs from the off-peak season, determined by the product of the difference in the average cost of pipeline purchases during the off-peak period and the average cost of LNG boiloff in the off-peak period times the LNG boiloff volumes purchased in the off-peak period, less the cost of injections and liquefaction into storage.
  - ii. Credit non-core commodity costs assigned to non-core customers to which the CGAC does not apply, as defined in Section 6.06 (NCCCP).
  - iii. Inventory finance charges (FC).
  - iv. Peak commodity Carrying Charges as defined in Section 5.00.
- (c) Capacity Costs Allowable Per Off-Peak Demand Formula shall be:
- i. Charges associated with transmission capacity and product demand procured by the Company to serve base load requirements in the off peak season.
  - ii. Charges associated with transmission capacity and product demand procured by the Company to serve firm load in excess of base load requirements in the off-peak period

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- iii. Credits associated with daily imbalance charges billed transportation customers in the off peak period.
  - iv. Off-peak demand Carrying Charges as defined in Section 5.00.
  - v. Other A & G and Acct. 851 charges associated with peaking production and storage capacity to serve firm load in the off-peak season as determined in the test year of the Company's most recent rate proceeding and allocated to firm sales storage service
- (d) Gas Costs Allowable Per Off-Peak Commodity Formula shall be:
- i. Charges associated with gas supplies, including any applicable taxes, procured by the Company to serve firm load in the off-peak season, less the reallocation of LNG boiloff costs determined by the product of the difference in the average cost of pipeline purchases during the off-peak period and the average cost of LNG boiloff in the off-peak period times the LNG boiloff volumes purchases in the off-peak period, less the cost of injections and liquefactions into storage.
  - ii. Credits associated with Non-core commodity costs from non-core sales to which the GAF is not applied, as defined in Section 5.00.
  - iii. Off-peak commodity Carrying Charges as defined in Section 5.00.

**(2) Calculation of the Reconciliation Adjustments**

Account 175 contains the accumulated difference between gas cost revenues and the actual monthly gas costs incurred by the Company. The Company shall separate Account 175 into Peak Demand (Account 175.21), Peak Production and Storage Demand (175.22), Peak Commodity (Account 175.23), Off-Peak Demand (Account 175.11), Off-Peak Production and Storage Demand (175.12) and Off-Peak Commodity (Account 175.13). Account 175.21 shall contain the accumulated difference between revenues toward capacity costs calculated by multiplying the Peak Demand Factor for the High and Low Load Factor classes,  $(DF_p^X)$  times monthly firm sales volumes for High and Low Load Factor classes, and the total capacity costs allowable per the peak demand formula. Account 175.22 shall contain the accumulated difference between revenues toward gas costs as calculated by multiplying the Peak Commodity Factor for the High and Low Load Factor classes,  $(CF_p^X)$  times monthly firm sales volumes for High and Low Load Factor classes, and the total commodity costs allowable per the peak commodity formula. Account 175.22 shall contain the accumulated difference between revenues as calculated by multiplying the Peak Production and Storage Demand Factor for the High and Low Load Factor class,  $(PS_p^X)$  times monthly firm sales volumes for the High and Low Load Factor classes, and the total production and storage costs allowable per the peak production and storage demand formula. Account 175.11 shall contain the accumulated difference between revenues toward capacity costs calculated by multiplying the Off-Peak Demand Factor for the High and Low Load Factor classes,  $(DFop^X)$  times monthly firm sales volumes for the High and Low Load Factor classes, and the total

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capacity costs allowable per the off-peak demand formula. Account 175.13 shall contain the accumulated difference between revenues toward gas costs as calculated by multiplying the Off-Peak Commodity Factor for the High and Low Load Factor classes, (CFop<sup>x</sup>) times monthly firm sales volumes for the High and Low Load Factor classes, and the total commodity costs allowable per the off-peak commodity formula. Account 175.12 shall contain the accumulated difference between revenues as calculated by multiplying the Off-Peak Production and Storage Demand Factor for the High and Low Load Factor classes, (PS<sub>op</sub><sup>x</sup>) times monthly firm sales volumes for the High and Low Load Factor classes, and the total production and storage costs allowable per the off-peak production and storage demand formula.

Carrying Charges as defined in Section 5.00 shall be added to each end-of-the-month balance. The peak demand reconciliation adjustment factor (RFpd) shall be determined for use in the peak GAF calculation by dividing the peak demand account (175.21) balance as of the peak reconciliation date, by the forecasted sales volume associated with the peak period. The peak production & storage demand reconciliation adjustment factor (RFppsd) shall be determined for use in the peak GAF calculation by dividing the peak production and storage demand account (175.22) balance as of the peak reconciliation date, by the forecasted sales volume associated with the peak period. The peak commodity reconciliation adjustment factor (RFpc) shall be determined for use in the peak GAF calculation by dividing the peak commodity account (175.23) balance as of the peak reconciliation date, by the forecasted sales volume associated with the peak period. The off-peak demand reconciliation adjustment factor (RFopd) shall be determined for use in the off peak GAF calculation by dividing the off-peak demand account (175.11) balance as of the off-peak reconciliation date, by the forecasted sales volume associated with the off-peak period. The off-peak production and storage demand reconciliation adjustment factor (RFoppsd) shall be determined for use in the off-peak GAF calculation by dividing the off-peak production and storage demand account (175.12) balance as of the off-peak reconciliation date, by the forecasted sales volume associated with the off-peak period. The off-peak commodity reconciliation adjustment factor (RFopc) shall be determined for use in the off-peak GAF calculation by dividing the off-peak commodity account (175.13) balance as of the off-peak reconciliation date, by the forecasted sales volume associated with the off-peak period.

The peak period reconciliation will be filed thirty (30) days prior to the peak period GAF filing, which is seventy-five (75) days prior to the effective date.

The off-peak period reconciliation shall be filed thirty (30) days prior to the off-peak period GAF filing, which is seventy-five (75) days prior to the effective date.

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- (1) The following definitions pertain to reconciliation adjustment calculations:
- (a) Working Capital Gas Costs Allowable Per Peak Demand Formula shall be:
- i. Charges associated with upstream storage, transmission capacity, and product demand procured by the Company to serve firm load in the peak season.
  - ii. Charges associated with transmission capacity procured by the Company to serve base load requirements in the peak season.
  - iii. Charges associated with upstream storage and transmission capacity procured by the Company to serve firm load in excess of base load requirements in the peak period, plus a reallocation of a portion of such charges incurred in the off-peak season to serve firm load.
  - iv. Carrying Charges
- (b) Working Capital Gas Costs Allowable Per Peak Commodity Formula shall be:
- i. Charges associated with gas supplies, including any applicable taxes, purchased by the Company to serve firm load in the peak season, plus a reallocation of LNG boiloff costs from the off-peak season, determined by the product of the difference in the average costs of pipeline purchases during the off-peak period and the average cost of LNG boiloff in the off-peak period times the LNG boiloff volumes purchased in the off-peak period, less the cost of injections and liquefactions into storage.
  - ii. Non-Core Commodity Costs associated with non-core sales to which the GAF is not applied.
  - iii. Carrying charges.
- (c) Working Capital Gas Costs Allowable Per Off-Peak Demand Formula shall be:
- i. Charges associated with transmission capacity procured by the Company to serve base load requirements in the off peak season.
  - ii. Charges associated with upstream storage and transmission capacity procured by the Company to serve firm load in excess of base load requirements in the off-peak period.
  - iii. Carrying charges.
- (d) Working Capital Gas Costs Allowable Per Off-Peak Commodity Formula shall be:
- i. Charges associated with gas supplies, including any applicable taxes, procured by the company to serve firm load in the off-peak season, less the reallocation of LNG boiloff costs determined by the product of the difference in the average cost of pipeline purchases during the off-peak period and the average cost of LNG boiloff in the off-peak period times the LNG boiloff volumes purchased in the off-peak period, less the cost of injections and liquefactions into storage.

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- ii. Non-core commodity costs associated with non-core sales to which the GAF is not applied, as defined in section 6.05.
- iii. Carrying charges.

- (2) The peak and off-peak, demand, and commodity working capital requirements shall be calculated by applying the Company's days lag divided by 365 days to the working capital costs allowable per each formula.
- (3) The peak and off-peak, demand, and commodity working capital allowances shall each be calculated by applying the Company's weighted cost of capital to each working capital requirement to calculate the respective returns on working capital. The interest portion of each working capital allowance is calculated by multiplying each working capital requirement by the weighted cost of debt. This portion is tax deductible. The return on each working capital less the interest portion of each working capital is then divided by one minus the tax rate. This figure plus the interest calculated above equals the working capital allowance for each.
- (4) Calculation of the Reconciliation Adjustments

Accounts 175.14, 175.13, 175.24, and 175.23 contain the accumulated difference between working capital allowance revenues and the actual monthly working capital allowance costs as calculated from actual monthly costs for the Company plus Carrying Charges as defined in Section 5.00.

The components of the Company's purchased gas days lag shall be recalculated each season based upon actual CGAC seasonal data. This recalculated days lag will be used in the calculation of the working capital allowance revenues. Each Account 175 shall contain the accumulated difference between revenues toward the working capital allowance and the working capital allowance.

The peak demand working capital reconciliation adjustment shall be determined for use in the peak demand factor calculations incorporating the peak demand working capital account 175.14 balance as of the peak reconciliation date designated by the Company. A peak commodity working capital reconciliation adjustment shall be determined for use in the peak commodity factor calculations incorporating the peak commodity working capital account 175.13 balance as of the peak reconciliation date designated by the Company. An off-peak working capital reconciliation adjustment (WCR<sub>opd</sub>) shall be determined for use in the off-peak demand factor calculations incorporating the off-peak demand working

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capital account (175.24) balance as of the off-peak reconciliation date designated by the Company. An off-peak commodity working capital reconciliation adjustment (WCRopc) shall be determined for use in the off-peak commodity working capital account (175.23) balance as of the off-peak reconciliation date designated by the Company.

**11.0 Application of GAF to Bills**

The Company will employ the GAFs as follows: The peak season rates to each Load Factor class shall be calculated by adding the respective peak demand factor and the peak commodity factor. The off-peak season rates to each Load Factor class shall be calculated by adding the respective off-peak demand factor and the off-peak commodity factor. The GAFs (\$/therm) for each Load Factor class for each season shall be calculated to the nearest one-hundredth of a cent per therm (\$0.0001) and will be applied to each customer's monthly sales volume within the corresponding Load Factor class.

**12.0 Information Required to be Filed with the Department**

Information pertaining to the cost of gas adjustment shall be filed with the Department in accordance with the Company's standardized forms approved by the Department. Required filings include a semiannual GAF filing which shall be submitted to the Department at least 45 days before the date on which a new GAF is to be effective.

Additionally the Company shall file with the Department a complete list of all gas costs claimed as recoverable through the CGAC over the previous season, as included in the seasonal reconciliation. This information shall be submitted with each seasonal GAF filing, along with complete documentation of the reconciliation adjustment calculations.

**13.0 Other Rules**

- (1) The Department may, where appropriate, on petition or on its own motion, grant an exception from the provisions of these regulations, upon such terms that it may determine to be in the public interest.
- (2) The Company may, at any time, file with the Department an amended GAF. An amended GAF filing must be submitted 10 days before the first billing cycle of the month in which it is proposed to take effect.
- (3) The Department may, at any time, require the Company to file an amended GAF.

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- (4) The operation of the cost of gas adjustment clause is subject to all powers of suspension and investigation vested in the Department by G.L. c.164.

**14.0 Customer Notification**

The Company will design a notice, which explains in simple terms to customers the GAF, the nature of any change in the GAF and the manner in which the GAF is applied to the bill. The Company will submit this notice for approval at the time of each GAF filing.

Upon approval by the Department, the Company must immediately distribute these notices to all of its customers either through direct mail or with its bills.

**15.0 Bad Debt Allowance****15.01 Purpose**

The purpose of this provision is to establish a procedure that, subject to the jurisdiction of the Department, allows Bay State to adjust, on a semi-annual basis, its rates for the recovery of Bad Debt Expense

**15.02 Bad Debt (BDF) Formula**

The Bad Debt (BDF) Formula shall be computed on an annual basis using forecasts of bad debt expense associated with gas costs, gas costs, carrying charges, sales volumes, and a working capital allowance. Forecasts may be based on either historical data or Company projections, but must be weather-normalized. Any projections must be documented in full with each filing. The forecast of bad debt expense associated with gas costs shall be based on the Company's projected gas costs in the respective seasonal GAF filings and the percent of net write-offs to total firm revenues as determined in the Company's last rate proceeding.

The calculation at the beginning of the off-peak season shall be on a projected annual basis. The calculation at the beginning of the peak season will update the remaining months of the projected annual period with actual bad debt expenses and collections for the available months and projections for the remaining months of the annual period. The following formula shall be used to calculate the Bad Debt factor.

$$\text{BDF} = \frac{\text{BD} + \text{RAbd} + \text{WCbd}}{\text{A:Sales}}$$

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$$\text{WCbd} = \frac{(\text{WCAbd} * \text{CC}) - (\text{WCAbd} * \text{CD})}{(1 - \text{TR})} + (\text{WCAbd} * \text{CD})$$

**and:**

$$\text{WCAbd} = \text{BD} * (\text{DL}/365)$$

**Where:****A:Sales** Forecast annual sales volumes.**BD** Forecast Bad Debt Expense as defined in Section 5.00; derived by multiplying the forecast annual gas costs by the percent of annual net write-offs to annual firm revenues as determined in D.T.E. 05-27.**CC** Weighted cost of capital as defined in Section 5.00.**CD** Weighted cost of debt as defined in Section 5.00.**DL** Number of days lag from the purchase of gas from suppliers to the payment by customers.**RAbd** Bad Debt Expense reconciliation adjustment - Account 175.31 balance.**TR** Combined Tax rate as defined in Section 5.00.**WCAbd** Bad Debt allowable for working capital application defined as the costs associated with the gas cost portion of bad debt incurred by the Company to serve firm load.**WCbd** Working Capital Allowance associated with the gas portion of bad debt for the period including the Pretax Weighted Cost of Capital as defined in Section 5.00.**15.03 Bad Debt Reconciliation Adjustment**

Account 175.31 shall contain the accumulated difference between the annual revenues toward bad debt, as calculated by multiplying the bad debt factors (BDF) times monthly firm sales volumes, and the annual allowed Bad Debt expenses, allowed working capital on Bad Debt and Carrying Charges as defined in Section 5.00.

An annual bad debt reconciliation adjustment (RAbd - as defined in Section 15.02) shall be determined for use in the bad debt factor calculations incorporating the bad debt working capital account (175.32) balance as of the reconciliation date designated by the Company.

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- (a) Costs Allowable per Bad Debt Formula shall be:
- i. Un-collectable gas costs incurred by the Company to serve firm sales load, as determined by deriving the portion of actual net write-offs associated with gas cost collections.
  - ii. Account 175.32 – Bad Debt, Carrying Charges.
  - iii. Working Capital Gas Costs Allowable per Bad Debt Formula, which shall be charges associated with bad debt incurred by the Company to serve firm sales load and applied to the working capital formula.